

III. Remarks

Claims 1 - 41 were filed with this application. Claims 34 - 36 have been canceled herewith without prejudice. Claims 1 - 33 and 37 - 41 remain in the application.

As stated previously the "Brief Description of the Drawings" were filed with the Specification on October 26, 1999. A copy of the "Brief Description of the Drawings" were provided above for the Examiner's convenience. The courtesy of a telephone call to the Applicants' attorney at the phone number given below is requested should the Examiner continue this objection.

The Official Action states that claims 34 - 36 are objected to "as being directed toward non-statutory subject matter." The Applicants have canceled these claims without prejudice in order to move the case toward allowance.

The Official Action also states that claims 1 - 3, 12 - 14 and 34 - 36 are rejected "under 35 U.S.C. 102(e) as being anticipated by Olafsson (U.S. Patent No. 6,332,009)." In discussing the Olafsson reference which is applicable to claim 1, the Official Action states, inter alia, that Olafsson discloses a system "for selecting a sign pattern length comprising a positive integer that is wholly divisible by four and is not wholly divisible by three." The claim language quoted appears in claim 1 of the present application. Since this is a basic requirement of the rejected claims of the application, this discussion will center on this requirement.

The requirement that the sign pattern length be "a positive integer that is wholly divisible by four and is not wholly divisible by three" is a key, objective requirement of the present application. In citing Olafsson for this element, the Official Action references column 16, lines 58-64 of the Olafsson specification. The referenced text from Olafsson does not mention such a restriction of the sign pattern length. In fact, the text states that the "length L could be fixed to any suitable number..." The Olafsson reference goes on to give an example of an acceptable sign pattern length and the example given is 96 (column 16, line 62). This example sign pattern length

from the reference is, in fact, wholly divisible by both three and four - in direct and obvious contrast to the specific requirement of claim 1 of the present invention.

Claims 2 and 3 of the present application depend directly or indirectly from claim 1 and thus include this restriction on the possible values of the sign pattern length. The selection of a sign pattern length wholly divisible by four but not wholly divisible by three has unexpected advantages as described in the present application. As stated on page 14, starting on line 26, "...with the sign pattern length not wholly divisible by three and both the even and odd subsequences of the sign pattern having a balanced number of zeros and ones" (another requirement of present claims 1 and 12), "the K-fold repetition of that sign pattern, where K is an integer multiple of three advantageously has a balanced sign distribution in every frame interval." The advantages of such an arrangement are further explained by way of an example, the discussion starting on page 14, line 31 of the present application.

This restriction of the sign pattern length, that it be wholly divisible by 4 but not wholly divisible by three, is not taught nor suggested by the Olafsson reference. In fact, the one example of a sign pattern length given in Olafsson does not meet this restriction. Also, as mentioned above and further explained in the present application, this restriction of values carries with it unexpected and non-obvious advantages over selecting a sign pattern length that does not comply with this restriction. As such, Applicants assert that claim 1 and its dependent claims, claims 2 and 3, are patentably distinct over the prior art of record and respectfully request that the rejection be withdrawn.

With respect to claims 12 - 14, these claims are analogous to claims 1 - 3 discussed above. Claims 12 - 14 are method claims whereas claims 1 - 3 are system claims. Claim 12 includes the same restriction on the possible values of the sign pattern length as claim 1. The Official Action references the same text from the Olafsson reference in order to provide this element. As discussed above, Olafsson does not anticipate, disclose or teach this element and, in fact, teaches away from such a restriction since the one example given does not meet the restriction. Claims 13 and 14 depend either directly or indirectly from claim 12 and thus include this restriction. As

such, Applicants assert that claim 12 and its dependent claims, claims 13 and 14, are patentably distinct over the prior art of record and respectfully request that the rejection be withdrawn.

The rejection of claims 34 - 36 will not be discussed since those claims have been canceled and the rejected mooted.

The Official Action goes on to state that claims 23 - 25 are rejected "under 35 U.S.C. 103(a) as being unpatentable over Olafsson in view of Langberg et al. (U.S. Patent No. 5,852,630)." This rejection is essentially the same as the rejection discussed above. The Official Action utilizes the Langberg reference to supply the element of implementing the present invention as a program product. The discussion above with respect to claim 1 - 3 and 12 - 14 is wholly applicable here. Claim 23 includes the same restriction on the possible values of the sign pattern length and claims 24 and 25 include the restriction through dependency. The Official Action simply references the earlier discussion in rejecting the claims, and thus uses the same text from the Olafsson reference. As discussed above, the specific restrictions made on the sign pattern length in the present application are not present, nor are they suggested, in the prior art. Also, the specified restriction provides specific and key advantages over the prior art as described in the referenced portions of the specification. As such, Applicants assert that claim 23 and its dependent claims, claims 24 and 25, are patentably distinct over the prior art of record and respectfully request that the rejection be withdrawn.

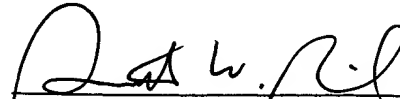
The Applicants note with appreciation the finding in the Official Action that the remaining claims, claims 4 - 11, 15 - 22, 26 - 33 and 37 - 41 are allowable as written.

For the reasons given and discussed above and for the reasons stated by the Examiner with respect to the allowed claims, it is respectfully submitted that the claims remaining in the present application are in condition for allowance. Early notification of allowance of the remaining claims is therefore respectfully requested.

If the Examiner feels that a telephone conversation would be helpful in resolving any remaining issues, the courtesy of a telephone call to the Applicants' attorney at the number listed below is requested.

Respectfully submitted,

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